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(54) **LIQUID CRYSTAL DISPLAY DEVICE**

color display.

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(57) Abstract:

PURPOSE: To provide the thin type lightweight and bright liquid crystal display device which is uniform in the brightness of a screen display and high in display quality, and obtains a high aperture rate without using any color filter and has a high definition, and can be reduced in cost.

CONSTITUTION: Light from three LED light sources 32 which are connected to end parts of optical waveguides 26 after being guided in is propagated to many pixel-side optical waveguides 26b through optical path conversion parts 33. Part of the light is transmitted through the walls of the optical waveguides 26 to irradiate external pixel electrodes 24. A voltage applied between the pixel electrodes 24 and a counter electrode 18 is switched by a switching element 25 and a liquid crystal layer 17 interposed between both the electrodes 24 and 18 is optically modulated and visually recognized as a display pattern. The pixel electrodes 24 makes a bright display to obtain a high-contrast

